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Go to next item

Graded Quiz: Performing Data Aggregation using SQL Aggregate Functions

Latest Submission Grade 98.07%

1. If we want to eliminate duplicates, we use the keyword _____ in the aggregate expression. **1 / 1 point**

- (•) DISTINCT
- ( ) Primary Key
- ( ) COUNT
- ( ) AVG

Correct
Correct! Distinct keyword is used to select only unique items from a relation.

2. What values does the COUNT(*) function ignore? **1 / 1 point**

- (•) Null Values
- ( ) Integers
- ( ) Repetitive Values
- ( ) Characters

Correct
Correct! All aggregate functions ignore null values. **COUNT** does not consider rows that have **NULL** values. Therefore, this can be useful for quickly identifying which rows have missing data.

3. In order to know how many times salaries have being paid to employees. Which of these is correct? ***(Select all that apply)*** **1 / 1 point**

- [ ] SELECT COUNT(salary) AS salary_count
  FROM employees;
- [x] SELECT COUNT(from_date) AS salary_count
  FROM salaries;

Correct
Correct! This query is correct. It returns how many times the company have paid salaries by counting the from_date field.

- [x] SELECT COUNT(salary) AS salary_count
  FROM salaries;

Correct
Correct! This query is correct. It returns how many times the company have paid salaries by counting the salary field.

- [x] SELECT COUNT(from_date)
  FROM salaries;

Correct
Correct! This query is correct. It returns how many times the company have paid salaries by counting the from_date field.

4. Which of the following would retrieve the total amount of salary for those employees employed before 1st February, 1986? **1 / 1 point**

- ( ) SELECT COUNT(salary) FROM salaries
  WHERE from_date < '1986-02-01';
- ( ) SELECT SUM(*) FROM salaries
  WHERE from_date < '1986-02-01';
- ( ) SELECT SUM(salary) FROM salaries
  WHERE from_date < '1986-01-02';
- (•) SELECT SUM(salary) FROM salaries
  WHERE from_date < '1986-02-01';
- ( ) SELECT COUNT(salary) FROM salaries
  GROUP BY from_date;

Correct
Correct! This query sums the salary field and properly reference the correct table. In addition, the date was correctly specified.

5. Which SQL statement is used to sort the result set of a query? **1 / 1 point**

- None of the above
- HAVING
- ORDER BY
- GROUP BY

Correct
Correct! The **ORDER BY** statement allows us to sort our results using the data in any column.

6. _____ allows you to filter rows based on a specified condition, while _____ allows you to filter group of rows according to a specified condition. **1 / 1 point**

- WHERE and SELECT DISTINCT
- WHERE and GROUP BY
- HAVING and WHERE
- WHERE and HAVING

Correct
Correct! **WHERE** allows you to filter rows based on a specified condition, while **HAVING** allows you to filter group of rows according to a specified condition.

7. What will be the result of this query? **1 / 1 point**

```
SELECT MIN(salary)
FROM salaries;
```

- Retrieves a list of all salary from the salaries table
- Retrieves the minimal salary from the salary column in the employees table
- Retrieves the minimum salary from the salary column in the salaries table
- Retrieves the minimum salary from the salary column in the employees table

Correct
Correct! The query returns the minimum salary from the salaries table.

8. Which of the following returns how many different first names are in the employees table? ***(Select all that apply)*** **0.75 / 1 point**

- [ ] SELECT COUNT(first_name)
  FROM employees;
- [x] SELECT COUNT(DISTINCT first_name)
  FROM employees;

Correct
Correct! This retrieves the different or distinct first name from the employees because of the inclusion of the DISTINCT statement

- [ ] SELECT first_name, COUNT(first_name)
  FROM employees
  GROUP BY first_name;
- [ ] SELECT first_name
  FROM employees
  GROUP BY first_name;

You didn't select all the correct answers

9. It is a good practice to GROUP BY the most distinct column in a table. **1 / 1 point**

- Maybe
- False
- True

Correct
Correct! It is a good practice to GROUP BY the most distinct column (the primary key) of a table.

10. Aggregate functions in SQL are _____ **1 / 1 point**

- User-defined functions
- Built-in functions

Correct
Correct! The aggregate functions are built-in SQL functions that are used to retrieve summaries of data from database objects.

11. The LIMIT statement is not always the last part of a query. **1 / 1 point**

- (●) False
- ( ) True
- ( ) Maybe

✓ **Correct**
Correct! In SQL, the LIMIT statement is always the last part of a query. It helps to retrieve rows or records of a table as specified.

12. It is not necessary to include the field you GROUP BY in the SELECT statement. **1 / 1 point**

- ( ) True
- (●) False

✓ **Correct**
Correct! It is very necessary to include any field you GROUP BY in the SELECT statement. If you do not do this, an error message comes up.

13. Which of the following is syntactically correct? ***(Select all that apply)*** **1 / 1 point**

- [ ] SELECT first_name, COUNT(first_name) AS names_count
  FROM employees
  HAVING COUNT(first_name) >10
  GROUP BY first_name
  ORDER BY first_name;
- [ ] SELECT first_name, COUNT(first_name) AS names_count
  FROM employees
  HAVING COUNT(first_name) >10
  ORDER BY first_name
  GROUP BY first_name;
- [x] SELECT first_name, COUNT(first_name)
  FROM employees
  GROUP BY first_name
  ORDER BY first_name DESC
  LIMIT 1000;

✓ **Correct**
Correct! This query retrieves first 1000 different first name in the employees table
and orders by first name in descending order.

- [x] SELECT first_name, COUNT(first_name) AS names_count
  FROM employees
  GROUP BY first_name
  HAVING COUNT(first_name) > 15
  ORDER BY first_name DESC;

✓ **Correct**
Correct! This extracts a list of names of employees, where the number of employees is more than 15
. Order by first name in descending order. In addition, this query is correct in terms of the order of the statements.

- [ ] SELECT first_name, COUNT(first_name)
  FROM employees
  ORDER BY first_name DESC
  GROUP BY first_name
  LIMIT 1000;